We Claim:

1. A method of inhibiting cancer development comprising the administration to a subject in need thereof of an effective amount of a fatty acid synthase inhibitor.

2. A method according to claim 1 wherein the subject is a mammal.

3. A method according to claim 1 wherein the subject is a human.

4. A method according to claim 1 wherein the subject has pre-cancerous lesions.

5. A method according to claim 5 wherein the pre-cancerous lesions express fatty acid synthase.

6. A method according to claim 5 wherein the pre-cancerous lesions express the *neu* protein.

7. A method according to claim 5 wherein the pre-cancerous lesions express fatty acid synthase and the *neu* protein.

8. A method according to claim 5 wherein the pre-cancerous lesions are in a tissue type selected from the group consisting of breast, prostate, colon, lung, stomach, mouth, and bile duct.

9. A method according to claim 8 wherein the tissue type is breast.

10. A method according to claim 8 wherein the tissue type is prostate.

11. A method according to claim 8 wherein the tissue type is colon.

12. A method according to claim 8 wherein the tissue type is lung.

13. A method according to claim 8 wherein the tissue type is stomach.

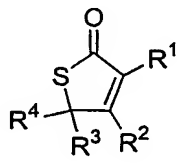
14. A method according to claim 8 wherein the tissue type is mouth.

15. A method according to claim 8 wherein the tissue type is bile duct.

16. A method according to claim 1 wherein the effective amount is in the range from about 60 mg/kg to about 7.5 mg/kg per day.

17. A method according to claim 1 wherein the fatty acid synthase inhibitor is a compound that directly inhibits the fatty acid synthase enzyme.

18. A method according to claim 1 wherein the fatty acid synthase inhibitor is a compound having the following formula:



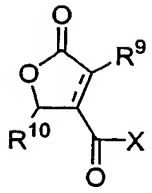
wherein:

R^1 = H, C_1-C_{20} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl, $-CH_2OR^5$, $-C(O)R^5$, $-CO(O)R^5$, $-C(O)NR^5R^6$, $-CH_2C(O)R^5$, or $-CH_2C(O)NHR^5$, where R^5 and R^6 are each independently H, C_1-C_{10} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl, optionally containing one or more halogen atoms.

R^2 = $-OH$, $-OR^7$, $-OCH_2C(O)R^7$, $-OCH_2C(O)NHR^7$, $-OC(O)R^7$, $-OC(O)OR^7$, $-OC(O)NR^7R^8$, where R^7 and R^8 are each independently H, C_1-C_{20} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl, and where R^7 and R^8 can each optionally contain halogen atoms;

R^3 and R^4, the same or different from each other, are C_1-C_{20} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl.

19. A method according to claim 1 wherein the fatty acid synthase inhibitor is a compound having the following formula:



R^9 = H, or C_1-C_{20} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl, $=CHR^{11}$, $-C(O)OR^{11}$, $-C(O)R^{11}$, $-CH_2C(O)OR^{11}$, $-CH_2C(O)NHR^{11}$, where R^{11} is H or C_1-C_{10} alkyl, cycloalkyl, or alkenyl;

R^{10} = C_1-C_{20} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl;

X = $-OR^{12}$, or $-NHR^{12}$, where R^{12} is H, C_1-C_{20} alkyl, cycloalkyl, alkenyl, aryl, arylalkyl, or alkylaryl, the R^{12} group optionally containing a carbonyl group, a carboxyl group, a carboxyamide group, an alcohol group, or an ether group, the R^{12} group further optionally containing one or more halogen atoms;

with the proviso that when R^9 is $=CH_2$, then X is not –OH.

20. A method according to claim 1 wherein the fatty acid synthase inhibitor is tetrahydro-3-methylene-2-oxo-5-n-octyl-4-furancarboxylic acid.